REMARKS

Reconsideration of the present application is requested.

It is conventional to provide the tread of a steer axle tire(i.e., a non-drive tire) of a heavy vehicle with outer circumferential ribs (edge ribs) and intermediate ribs, all of which have inclined incisions formed therein to improve the wear characteristics of the ribs (see paragraphs 05 and 06 of the specification).

As explained in paragraphs 007 and 008, however, the present inventors have learned that in such a tread of a steer tire, the edge ribs can, on the average, wear more rapidly than the intermediate ribs. As a result of that different wear rate, the overall tire life is reduced.

In order to render the tread's wear rate more uniform from rib to rib (see paragraph 009), the presently claimed invention envisages that the intermediate ribs of a steer axle tire possess inclined incisions, and the edge ribs are not provided with inclined inclinations (perhaps with no incisions at all – see Fig. 1). That feature, which was previously recited in claims 4, 6 and 9, is now recited in claim 1 as well.

The present claims stand rejected over a combination of prior art references of which EP '104 is the base reference. However, that document discloses tire treads having ribs, all of which possess inclined incisions. That document is not concerned with, and does not discuss, the wear rate of the tread which is the concern of the presently claimed invention. Rather, the stated objective in EP '104 is to provide sharp edges on a tire tread to improve the braking properties of winter or all-season tires on wet ground, and improve the traction properties of such tires on snow or ice covered roads (see column 2, lines 25-30). There is no mention of improving tire life. Thus, the purpose of providing the inclined sipes or inclined

incisions in the tire tread of EP '104 is to create self-sharpening edges in the tread which better grip the surface over which the tire is traveling (column 4, lines 21-31). Accordingly, it would be counterintuitive to an artisan to minimize the number of ribs having the inclined incisions; rather, there would instead be a tendency to maximize the number of such ribs for improved traction. In other words, it would not have been obvious to omit inclined ribs in either of the edge ribs of EP '104, in contrast to the presently claimed invention (claims 1 and 9) which omits inclined incisions in the edge ribs of a steer axle tire in order to make the wear rate more closely approximate that of the intermediate ribs.

Moreover, neither of the secondary references (Sloman et al. and MacMillan) provides such a teaching, so it is submitted that all claims distinguish patentably over the applied prior art.

Claims 1 and 9 distinguish patentably over EP '104 for an additional reason. Those claims recite that:

1) each incision includes a generally concave side and a generally convex side, the generally concave side facing generally toward the tread's outer surface, and

2) a radially innermost point of each incision is located, relative to the indicated rolling direction of the tire, in front of the point of the incision located on the tread's outer surface.

For reasons explained below, EP '104 does not disclose or teach the combination of those two features.

In Figs. 1-3 of EP '104, the direction of rotation S of the tire (and thus also the direction of vehicle travel V) is indicated. Based on that information, it can be

deduced from Fig. 2 that the tire is a drive axle tire, i.e., it is mounted on a driving axle, not on a steering (non-driving) axle. In that regard, if the tire were mounted on a steering axle, friction of the road acting on the tread would have caused the road-contacting surfaces of the ribs to be flexed to the left in Fig. 2, i.e., in a direction opposite to the travel direction and in the rolling direction. The fact that the ribs flexed to the right means that the tire is a drive tire which is forcefully engaging the road rather than following along as in the case of a steering (non-driven) tire which is influenced by road friction.

In the case of treads having inclined incisions shown in Figs. 4-6 and 7-9 of EP '104, it is not stated whether the tire is a drive axle tire or a steer axle tire. If one were to assume that the rolling direction in Fig. 5 is still clockwise as in Fig. 2, then the tire would be a steer axle (non-drive) tire since the outer edges of the ribs have been flexed in a direction away from the travel direction by road friction acting on the tread. Thus, the rolling direction would be clockwise, meaning that the radially innermost point of each incision is located, relative to the rolling direction, behind the point where the incision intersects the tread's outer surface, rather than in front of such point as recited in each of claims 1 and 9.

On the other hand, if the above assumption were incorrect, i.e., if the tire of Figs 4-6 were intended to be a drive axle tire, then Figs. 4-6 would not be applicable to the presently claimed steer axle tire.

As regards Figs. 7-9 of EP '104, regardless of whether the tire is a drive axle tire or a steer axle tire, the generally concave sides of the incisions face away from the tread's outer surface, rather than toward the outer surface as presently claimed.

Accordingly, it is submitted that claims 1 and 9 distinguish patentably over the applied prior art and that the present application is in condition for allowance.

Respectfully submitted,

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